Release A CDR RID Report

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Document Data Server Design
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RID ID **CDR** 66
Review SDPS/CSMS
Originator Ref GD-CDR-CL-23
Priority 2

Category Name Data Server(DSS) Design **Actionee** ECS
Sub Category
Subject Links of users-requests<->staged_files

Description of Problem or Suggestion:

There appears to be no easy way to maintain links from users <- requests <-> staged_file s in the various CSCIs of the Data Server. These links are critical to supporting some important policies at the DAACs:
(1) sending out an expiration warning 24 hours before the files are deleted (as practiced at LaRC and to be instituted at GSFC)
(2) preventing monopolization of DAAC resources by limiting the total volume of outstanding FTP requests (pending+staged) for a given user (as practiced at GSFC)
While these particular policies may not be universal or implemented as such in ECS, they suggest that a CLASS of useful policies exists that relies on these links being maintained in a useful manner (i.e. so that they can be used to implement the policies.)

Originator's Recommendation

Demonstrate how these links are maintained and could be used to support the above policies (or policy variants of equal utility if desired.)

GSFC Response by: **GSFC Response Date**

HAIS Response by: Donald Richardson **HAIS Schedule** 9/13/95
HAIS R. E. G. Cordrey **HAIS Response Date** 11/1/95

The Data Server's STMGT CSCI, maintains information about files resident on the pull disk and destined for electronic distribution - reference classes DsStPullList and DsStPullMonitor in DID 305 Section 6.3. Information maintained includes (but is not limited to) request id, recipient user name, recipient address, requested file name, requested file size and file deletion time. (Operations in class DsStPullList which are documented in DID 305 refer to these attributes of another class which was not present in DID 305. This omitted class represents the data maintained for files in the pull list, and has subsequently been added to the design.) Thus STMGT maintains the information requested in the RID, and this information can be used to implement DAAC policies such as those discussed in the RID.

As files are successfully pulled from the pull area, the Data Server receives an indication of what file was pulled, when it was pulled and by whom. The STMGT CSCI uses this information to update its list of pull files. It consequently knows when all requesters have pulled their file(s) and then marks the file(s) as a candidate for deletion.

Sending expiration warning messages to users 24 hours before the files are deleted is supported using existing data as indicated above. Different functionality, such as the ability to change the warning time for individual users, could be supported by specialization from and/or enhancement of (depending upon the magnitude of the change in functionality) the pull list.

The concept of preventing the monopolization of DAAC resources on a per-user basis is Release B functionality; in Release A the constraint is supported on a global basis, i.e. resource constraints apply to all users equally. DAAC operations personnel specify the value of storage system operating parameters which are maintained in configuration files. (Reference classes DsStSCacheConfig and DsStResourceConfig in DID 305 Section 6.3.)

Setting and enforcing a limit for the total volume of outstanding FTP requests (pending+staged) for individual users is order volume tracking, which is functionality scheduled for Release B. The principal design change involves defining the limits in the MSS-provided user profile, and STMGT using the user profile limits in lieu of the Release A global limits.

Status **Closed** **Date Closed** **11/30/95** **Sponsor** **Kobler**

****** **Attachment if any** ******

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